Brief Descriptions of Catalog Items

Transportation Systems Management (TSM)

This document provides brief descriptions of the policy options contained in the corresponding TSM Catalog of Policy Actions for use by the Transportation System and Investment Technical Work Group (TWG). The catalog and these brief descriptions will be developed more fully during the climate planning process.

TSM-1. BIKE AND PEDESTRIAN INCENTIVES

1.1 Promote Bike Share Programs

Promote bike share opportunities by creating a bike share and partner with local business to expand bike share program throughout the local jurisdiction. Advertise bike sharing programs throughout the area to encourage participation. This also includes promoting bike routes and bike sharing programs through online software programs that can be accessed by local jurisdictions, employers and public agencies.

1.2 Promote Bicycle Valets and Safe Bicycle Parking

Encourage bicycle valet options at large attendances events or high-density commercial areas to make it easier for cyclists to park their bicycles. Provide safe bicycle parking options at transit stations, office parks, central business districts, and other areas frequented by cyclists.

1.3 Increase Bike/Walk Trips with Improved Streets and Facilities

Increase the number of trips taken by walking or cycling by making streets more accessible and safe for cyclists and pedestrians; this can be accomplished by adding bike lanes and sidewalks. Offer bike friendly public facilities, transit, and shops through special route maps, increase bike rental locations and promote bike paths that circulate through popular tourist attractions and provide connections to local cycling groups. Ensure direct access to destinations and continuity through connected facilities, which will encourage the use of bicycle and pedestrian facilities.

1.4 Promote Transportation Alternative by Third Parties

Promote transportation alternatives by third parties such as BikeStation, green bike programs, bike rentals, and pedi-cabs. Distribute information regarding available options.

1.5 Subsidize Bicycles and Bicycle Accessories

Provide manufacturers, wholesalers, retailers, or customers financial incentives such as tax breaks, rebates, and grants to encourage bicycle use.

1.6 Valet Bicycle Parking at Events

Convenient and secure bicycle valet service at major events.

1.7 Walk and Bike Safety Education

Provide walk and bike safety education for school-aged children.

TSM-2. ROAD TRAFFIC MANAGEMENT

2.1 Lower and Enforce Speed Limits

Smoother flowing traffic improves fuel efficiency. Speeding vehicles do not operate at fuel-efficient conditions and contribute significantly to accidents, which clog transportation systems and can cause significant congestion and idling.

2.2 Develop Traffic Calming Systems

Continue to redesign intersections to increase pedestrian safety and amenity, including the provision of crosswalks, bulb-outs, and pedestrian refuges. Favor traffic-calming devices that make use of increased planted areas, such as residential traffic circles, neck-downs, etc. Incorporate traffic calming techniques (e.g., intersections with bulb-outs to lower traffic speed yet maintain traffic flow throughput) into the community planning stages of municipal projects

2.3 Increase Use of HOV, HOT, and Dedicated BRT lanes

HOV, HOT, and dedicated BRT lanes increase highway flow by transporting more people in fewer vehicles or charging people to drive on less congested lanes. Improved traffic flow decreases congestion and idling.

2.4 Increase Bus Traffic Signal Preemption

Implement system s that allows the normal operation of traffic lights to be preempted by light-rail and bus rapid transit systems to allow public transportation priority access through intersections to ensure they are able to remain on schedule and improving commute times.

2.5 Arterial Traffic Management

Modify arterial roadways to encourage more efficient bus operation. Examples include dedicated bus lanes and signal preemption.

2.6 Use Intelligent Transportation Systems to Share Information with Drivers

Use ITS to share information with drivers about road conditions and closures. ITS is used to add information and communications technology to transport infrastructure and vehicles in an effort to manage vehicles, loads, and routes to improve safety and reduce vehicle wear, transportation times, and fuel consumption.

2.7 Synchronize Traffic Signals

Synchronize traffic signals to reduce vehicle idling at red lights and improve traffic flow.

2.8 Encourage Bus Tracking Systems and Information Sharing

Bus tracking systems provide information to transit riders about the arrival and departure times of transit vehicles. This information increases the convenience of using public transit by decrease passenger wait times and missed connections. This can include electronic signposts, leaflets, information call centers, and online information.

2.9 Provide Transit Information Easily Understandable and in Multiple Languages

Take transit options and information easy to understand to people in multiple languages. This can include signposts, leaflets, information call centers, and online information.

2.10 Implement Smart Bus Technology

Use GPS and electronic displays at bus stops to provide passengers real time updates on the bus transit system. Will also allow system operators to respond more quickly to system disturbances.

2.11 Transportation Operating System

Develop a transportation operating system for the region. This can include a master database with the ability to populate to vehicle navigation and computer and handheld applications.

2.12 Changeable Message Signs

Changeable Message Signs that are installed on major arterials to reduce congestion and redirect movements and provide alternative routes to maintain traffic throughput.

2.13 Freeway Service Patrol

Create and fund a freeway service patrol program. Contract private tow truck operators to patrol highways and freeways during peak or near peak traffic hours.

2.14 Improved Transit to Public Events

Alleviate gridlock at public events (concerts, sporting events etc.) by providing additional public transit lines.

2.15 LOS Standards

Create levels of service standards for all users. De-emphasize the facilitation of personal vehicle movement.

TSM-3. ALTERNATIVE MODES OF TRANSPORTATION

3.1 Encourage Government Employees to Use Alternative Transportation

Government entities can encourage their employees to travel by alternative transportation by providing financial incentives, locating their offices in transit friendly areas, and supporting safe bicycle parking facilities. This also includes telecommuting for government employees.

3.2 Encourage Alternative Transportation

Encourage people to travel on alternative transportation by developing convenient public transit options and infrastructure that facilitates bicycle and pedestrian travel such as bike lanes, wide sidewalks, and denser neighborhoods.

3.3 Tap Funding Sources for Alternative Transportation

Tap funding sources for alternative transportation from state and federal agencies.

3.4 Support School Bus Use

Encourage school bus use and discourage students from traveling to school in private vehicles.

3.5 Encourage Large Businesses to Develop Alternative Transportation Plans

Encourage large businesses to develop alternative transportation plans to help their employees commute to work. These plans can include working to transit agencies to integrate them into the transit service area, promoting car pooling, locating the business in more transit friendly areas, and creating safe bicycle storage facilities.

3.6 Transit Funding

Prioritize funding in an effort to shift from private vehicle usage to public transit and other modes of transportation. Projects that support public transit/infrastructure and reduce private VMT would be emphasized.

3.7 Promote Maintenance and Driver Training

Provide online and offline training programs for drivers to learn how to maintain their vehicles and drive in ways that maximize vehicle fuel efficiency and safety.

3.8 Distribute Educational Information

Provide online and offline driver and vehicle safety and fuel efficiency information online and through brochures. The information should appeal to a board audience and be simple to follow.

3.9 Help Establish Baseline to Green Transportation Standards

Collect data on transportation system efficiency (throughput, speed, safety), disruptions (weather and accidents), and emergency service trips to monitor the transportation system and compare it to other regional systems.

3.10 Telecommuting and Alternative Work Schedules

Promote telecommuting and alternative work schedules for employees.

TSM-4. TRANSIT SERVICE FACILITIATION

4.1 Expand Transit System Services

Increase transit system services areas, frequency of service, and quality of service to encourage increased customer use. Transit systems should focus on providing safe, confinement, and comfortable transportation to as large a percent of their service area population that they can serve.

4.2 Improve Transit Stops and Stations

Make transit stops and stations more comfortable, safe, and interesting. Provide more benches, shelters, signage, and public art to make more convenient waiting areas.

4.3 Encourage Regional Transit Programs

Encourage regional transit programs that connect neighboring cities and universities, schools, hospitals, business districts, entertainment areas, and residential neighborhoods.

4.4 Facilitate Intermodal Travel

Design transit systems that facilitate connecting by vehicle, bicycle, bus, and rail systems by having facilities that accommodate these various transportation modes. These types of intermodal systems can include bicycle racks on buses and park and ride parking lots at bus and rail stations.

4.5 Focus Transit Resources

Focus on areas of high volume and demand, such as colleges and centers of employment.

4.6 Free Transit Feasibility

Study the feasibility of providing free transit in areas of fifteen housing units or more per acre, as well as redirecting service from areas of low residency.

4.7 Universal Fare Media Card

Promote the use of a universal fare media card that can be used on any transit system.

4.8 Off-peak Flag Stops

Create flag stops in urban areas. Passengers traveling during off-peak hours can signal bus drivers to stop and pick them up.

4.9 Real-time Transit Information

Facilitate use of transit by providing high quality, real-time transit information at shelters and on websites accessible by cell phone, PDA, or other means.

TSM-5. FREIGHT AND HEAVY DUTY INCENTIVES

5.1 Encourage Old Vehicle and Equipment Retirement for General Public

Encourage old vehicle and equipment retirement by the public by offering incentives to retire these vehicles and equipment and replace them with more fuel efficient replacements.

5.2 Encourage Old Vehicle and Equipment Retirement for Construction Vehicles

Encourage old construction vehicles retirement by offering incentives to retire these vehicles and replace them with more fuel efficient replacements.

5.3 Expand Use of Alternative Fuels

Encourage use of vehicles and engines that use alternative fuels such as CNG, LNG, biodiesel, electric vehicles, plug in hybrids, and regular hybrids.

5.4 Develop Alternative Fuel Stations

Help develop alternative fuel stations so it is more convenient to use vehicles that use such fuels.

5.5 Convert Street Sweeping and Refuse Vehicles to Alternative Fuels

Convert street sweeping and refuse vehicles from diesel to alternative fuels to liquefied natural gas or other alternative fuels.

5.6 Replace Local Government Fleets with Alternative Fuel Vehicles

Require 85 percent of the local government fleet to use alternative fuels.

5.7 Convert Transit Buses to Alternative Fuels

Require local transit buses to use alternative fuels.

5.8 Replace Gasoline Powered Mowers with Electric Mowers

Require all gasoline powered mowers be phased out with electric mowers or ban their sale. Offer incentives for people to purchase electric mowers such as rebates and other subsidies.

5.9 Require Zero Emission Forklifts

Require zero emission forklifts.

5.10 Develop Anti-Idling Regulations for Heavy Duty Vehicles

Adopt and enforce anti-idling regulation for heavy duty vehicles. Heavy Duty Vehicles should be required to stop idling their engines after a short period of time if the cargo or passengers they carry do not need climate control or other vital electricity facilitated activity, especially if external vehicle electrification options are available.

5.11 Develop Anti-Idling Regulations for Construction Equipment

Adopt and enforce anti-idling regulation for construction equipment. Both vehicle and non-vehicle construction equipment should be required to stop idling their engines after a short period when they are not in use. This should only be done if doing so does not increase safety risks of operating or hosting the equipment. Additionally, external electrification sources, other than the equipment motor, should be encouraged.

5.12 Encourage Truck Stop Electrification

Provide regulatory and financial support for the development of truck stop electrification facilities.

5.13 Promote Truck Refrigeration Units

Provide regulatory and financial support hybrid electric-powered truck refrigeration systems and electrical docks at loading and unloading stations for trucks that move goods that need climate control.

5.14 Reduce Locomotive Fuel Use

Provide regulatory and financial support to locomotives that use alternate fuels, efficient engines, and other improved technology to improve fuel efficiency.

5.15 Encourage Cold Ironing at Ports

Provide regulatory and financial support Cold Ironing (or AMP - Alternative Maritime Power). Cold Ironing is the process of providing shore-side electrical power to a ship at berth while its main and auxiliary engines are turned off. Cold ironing permits emergency equipment, refrigeration, cooling, heating, lighting, and other equipment to receive continuous electrical power while the ship loads or unloads its cargo.

5.16 Facilitate Freight Logistics Improvement

Promote freight logistics systems and processes that select the most safe and fuel efficient methods to arrange goods storage, transport, and handling.

5.17 Allow Increased Size and Weight of Trucks

Size and Weight restrictions on trucks sometimes mean that an amount of goods that could have been transported by one large truck ends up being transported by two trucks. Road quality and other road safety conditions should be considered simultaneously with this regulation.

5.18 Facilitate Pre-Clearance at Scale Houses

Pre-clearance at scale houses can reduce or eliminate the amount of time trucks need to spend in lines waiting to be scaled while on the road. This reduces idling and truck congestion.

5.19 Promote Freight Villages / Consolidation Centers

Encourage freight villages. A freight village is a defined area within which all activities relating to transport, logistics and the distribution of goods, are carried out by various operators. Freight villages include warehouses, break-bulk centers, storage areas, offices, and truck parks. The close proximity of a wide range of freight services and suppliers may reduces truck vehicle miles traveled.

5.20 Support Procurement of an Efficient Heavy Duty Vehicle Fleet

Encourage the procurement of efficient heavy duty vehicle fleets that use more fuel efficient engines, more aerodynamic designs, and other fuel saving technologies.

5.21 Freight Rail Electrification

Shift to electric powered freight lines as a major component of emission reduction strategy.

5.22 Zero Emission Trucks

Initiate a mode shift in the commercial truck fleet by replacing diesel trucks with electric trucks. Electric LGVs will have a range of a hundred miles or more and eliminate carbon dioxide, nitrous oxide and PM10 emissions.

5.23 Dedicated Truck Corridors

Supplement mixed-use corridors with dedicated truck corridors. Levels of truck diversion may vary.

TSM-6. PRICING INCENTIVES AND DISINCENTIVES

6.1 Adopt Congestion Pricing

Encourage congestion pricing. Congestion pricing is a system of surcharging users of a transport network in periods of peak demand to reduce traffic congestion.

6.2 Adopt Emission Based Tolls

Encourage emission-based tolls that charge more to drivers who drive higher green house gas emitting vehicles.

6.3 Implement Urban and Intercity Road Tolls

Encourage urban and intercity road tolls that charge more to drivers who drive on urban and intercity roads.

6.4 Use Tolls Revenue to Fund Alternative Fuel Vehicles

Use revenue from congestion pricing, emission based tolls, urban tolls, and intercity road tolls to fund programs that encourage alternative fuel vehicles.

6.5 Implement Parking Pricing, Excise Tax, and Supply Restrictions

Use parking pricing, excise tax, and supply restrictions to decrease incentives to travel in low occupancy private vehicles.

6.6 Increase the Fuel Sales Tax

Increase the fuels sales tax to decrease congestion and increase transportation system funding.

6.7 Require Mileage Based Insurance

Require mileage based insurance to decrease congestion.

6.8 Increase Gas Price to Include Carbon and Pollution Costs

Increase gas price to include carbon and pollution costs. This would decrease congestion and improve air quality.

6.9 Convert Existing Roads to Toll Roads

Convert existing roads to toll roads. This policy may simultaneously reduce congestion and generate toll revenue.

6.10 Implement VMT Tax

Implementing VMT tax would reduce congestions and charge people for how much they actually drive. This policy has an advantage over the fuel tax in that it is not affected by improving vehicle fuel efficiency.

6.11 Parking Benefit Districts

Create parking benefit districts. These districts will use meter revenue for investment in pedestrian infrastructure and public amenities.

6.12 Performance Pricing for Parking

Raise street parking prices in an effort to ensure frequent turnover and keep fifteen percent of spots open at a time.

6.13 Unbundle Parking from Leases

Unbundling parking from leases will allow tenants to pay separately only for the number of spots they need, reducing the need for parking infrastructure in residential areas.

6.14 Transportation Impact Fees

Put impact fees collected from new and proposed development back into the transit system.

6.15 Eliminate/Reduce Parking Minimums

Reduce or eliminate minimums for off-street parking. May be coupled with mandatory parking maximums.

6.16 Increase Parking Rates

Increase parking rates at meters and public parking lots.

6.17 Transit Discounts to Events

Provide discounts for public transit rides to major events.

6.18 Parking Cash-out Program

Provide employees with a cash allowance in lieu of subsidizing parking. This program reduces total commute miles and encourages alternative modes of transportation.

6.19 VMT Based Emission Fees

Link VMT and emissions rates in an effort to reduce the number of high-emitting vehicles and to promote vehicle maintenance.

TSM-7. BASELINE DATA COLLECTION MEASURES

7.1 Monitor Travel Time Delays

Introduce methods to monitor travel time delays as part of an intelligent transportation system (ITS).

7.2 Performance Measures for Arterial Streets

Introduce measures that focus on mobility monitoring and surface street congestion analysis as part of an ITS.